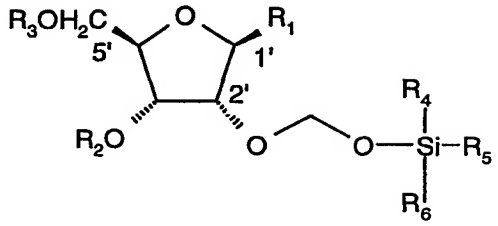
CLAIMS

1. A ribonucleoside-derivative of the formula



wherein

R_1 is a base of the purine- or pyrimidine-family or a derivative of such a base or any other residue which serves as a nucleobase surrogate,

R_2 is a proton or a substituted derivative of phosphonic acid,

R_3 is a proton or a protection-group for the oxygen atom in 5'-position,

R_4, R_5 and R_6 are independently alkyl or aryl or a combination of alkyl and aryl or heteroatom, R_4, R_5 or R_6 may also be cyclically connected to each other;

and

wherein at least one of the R_4, R_5 or R_6 substituents comprises a tertiary C-atom or a heteroatom vicinal to the Si-atom.

2. A ribonucleoside-derivative according to claim 1 wherein the substituent comprising the tertiary C-atom vicinal to the Si-atom comprises from 4 to 24 C-atoms.

3. A ribonucleoside-derivative according to claim 1 or 2 wherein the substituent comprising the tertiary C-atom vicinal to the Si-atom is an alkyl-substituent selected from the group consisting of tert-butyl, tert-pentyl, tert-hexyl, tert-heptyl, tert-octyl, tert-nonyl, tert-decyl, tert-undecyl, tert-dodecyl.

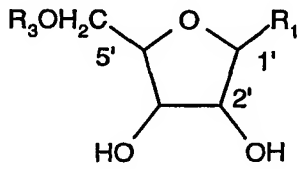
4. A ribonucleoside-derivative according to claim 1, 2 or 3 wherein the substituent comprising the tertiary C-atom vicinal to the Si-atom is selected from the group of 1,1-dimethyl ethyl, 1,1-dimethyl-propyl, 1,1-dimethyl-butyl, 1,1-dimethyl-pentyl, 1,1-dimethyl-hexyl, 1,1,2-trimethyl-propyl, 1,1,2-trimethyl-butyl, 1,1,2-trimethyl-pentyl, 1,1,2-trimethyl-hexyl, 1,1,2,2 tetramethyl-propyl, 1,1,2,2-tetramethyl-butyl.

5. A ribonucleoside-derivative according to claim 1 wherein the substituent vicinal to the Si-atom comprises a substituted heteroatom.

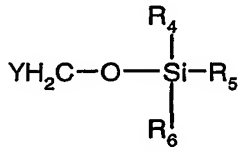
6. A ribonucleoside-derivative according to claim 5 wherein the substituent vicinal to the Si-atom comprises a substituted bivalent heteroatom.

7. A ribonucleoside-derivative according to claim 6 wherein the heteroatom is oxygen.

8. A method for the preparation of a ribonucleoside-derivative according to claim 1, comprising reacting a nucleoside with the formula



where R_1 and R_3 are as defined in claim 1, with a silyloxymethylderivative of the formula



wherein Y is a suitable leaving group

and wherein R_4, R_5 and R_6 are independently alkyl or aryl or a combination of alkyl and aryl or a heteroatom, R_4, R_5 or R_6 may also be cyclically connected to each other.

9. The method of claim 8 wherein Y is a halogen.

10. The method of claim 8 or 9 wherein R_4, R_5 and R_6 together comprise between 3 and 30 carbon atoms.

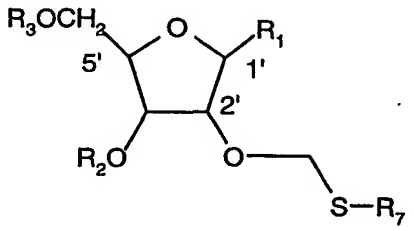
11. The method of claims 8 or 9 wherein R_4, R_5 or R_6 comprise at least one substituted heteroatom vicinal to Si atom.

12. The method of claim 11 wherein the heteroatom is a bivalent atom.

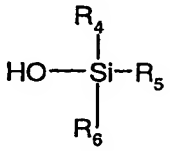
13. The method of claim 12 wherein the heteroatom is oxygen.

14. The method of claim 11, 12 or 13 wherein the ribonucleoside derivative is further substituted on the oxygen in 3'-position with a group comprising of a derivative of phosphonic acid.

15. A method for the preparation of a ribonucleoside-derivative, comprising reacting a ribonucleoside derivative with the formula



upon an electrophilic activation with a compound of formula:



wherein R_1 is defined as in claim 1 and R_7 is a alkyl- or aryl-group, or alkyl-aryl-group,
wherein R_2 is a protecting group,
wherein R_3 is a protecting group,
wherein R_4, R_5 and R_6 are identical or different alkyl or aryl or a combination of alkyl and aryl substituents, which my be further substituted with heteroatoms and which may also cyclically be connected to each other.

16. The method of claim 15 wherein R_4, R_5 and R_6 are defined as in claims 1 to 7.

17. The method of claim 15 or 16 wherein the ribonucleoside derivative is further substituted on the oxygen in 3'-position with a group comprising of a derivative of phosphonic acid.